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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	Adnan Kavak, et al.
Serial No.	:	10/078,277
Filed	:	February 19, 2002
For	:	APPARATUS AND METHOD FOR ALLOCATING WALSH CODES TO ACCESS TERMINALS IN AN ADAPTIVE ANTENNA ARRAY CDMA WIRELESS NETWORK
Group No.	:	2616
Examiner	:	Donald L. Mills

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal. The review is requested for the reason(s) stated in the arguments below, demonstrating the clear legal and factual deficiency of the rejections of some or all claims.

Claims 1-3, 6, 9-13, 16, and 19-24 have been rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 6,996,056 to *Chheda, et al.*, hereinafter referred to as "Chheda" in view of U. S. Patent No. 6,031,877 to *Saunders*, hereinafter referred to as "Saunders".

Claim 1 requires "a database capable of storing R active wireless terminal records, each of said R active wireless terminal records containing: 1) an active orthogonal code and 2) corresponding downlink beamforming coefficients used to communicate with one of said wireless access terminals." Claim 11 requires "a database capable of storing R active wireless terminal records, each of said R active wireless terminal records containing: 1) an active orthogonal code and 2) corresponding downlink beamforming coefficients used to communicate with one of said wireless access terminals". Claim 21 requires "storing R active wireless terminal records, each of the R active wireless terminal records containing: 1) an active orthogonal code; and 2) corresponding downlink beamforming coefficients used to communicate with one of the wireless access terminals". These limitations are not taught or suggested by Chheda or Saunders, nor any combination of them.

Chheda does not teach or suggest a database of active wireless terminal records, where each record had an active orthogonal code and corresponding downlink beamforming coefficients. In fact, Chheda does not mention beamforming coefficients at all, much less specific sets of coefficients each corresponding to an active orthogonal code and stored as claimed.

The Examiner originally alleged that Chheda's col. 5, lines 14-17, col. 8, lines 49-54, and col. 11, lines 17-29 teach the claimed database, but this was shown to be clearly incorrect. The Examiner now instead alleges that a CDMA base station using orthogonal codes is "equivalent" to a database of active wireless terminal records, where each record had an active orthogonal code and

corresponding downlink beamforming coefficients. This is wholly unsupported in the art, and the rejection is legally and factually deficient.

The Examiner also makes a statement in response that "[t]he claims are read with a broad reasonable literal interpretation, and claims are read in light of the specification without reading limitations from the specification into the claims." The claims require "a database capable of storing R active wireless terminal records, each of said R active wireless terminal records containing: 1) an active orthogonal code and 2) corresponding downlink beamforming coefficients used to communicate with one of said wireless access terminals." Any "broad reasonable literal interpretation" must include a database storing records as claimed. There is no "broad reasonable literal interpretation" that can interpret this database with specific characteristics to be equivalent to a BTS without a database, and having none of the claimed characteristics.

The Examiner further states that "Chheda disclose ... using smart beamforming attennas with preselected coefficients (equivalent to an active orthogonal code used to communicate with one of the terminals)...." As Applicant has already specifically pointed out, Chheda does not teach anything about coefficients. Chheda also doesn't describe anything as "preselected". In short, the Examiner's statement here of Chheda's teachings is wholly incorrect.

Claim 1 further requires "comparing said each of said R active wireless terminal records to new downlink beamforming coefficients suitable for forming a downlink transmit beam for transmitting to said new wireless access terminal and, in response to said comparison, determines at least one active wireless terminal record containing corresponding downlink beamforming coefficients that have the least correlation with said new downlink beamforming coefficients".

Claims 11 and 21 include similar limitations. These limitations are similarly not taught or suggested by Chheda.

As Chheda does not at all teach or suggest the beamforming coefficients as claimed, it certainly does not teach the claimed comparison and determinations related to the beamforming coefficients, or the responsive determination required by the claims. The Examiner concedes that this feature is not taught or suggested by Chheda, and so looks to Saunders.

The Examiner specifically cites Saunders col. 2, lines 49-63:

> Apparatus for receiving and transmitting information from an array of adaptive antenna elements, the apparatus comprising storage means for storing received information and characterised by: a predictive filter for estimating, in response to the received information, predicted information likely to be received by the apparatus in at least one future transmission to the apparatus; and means for combining the previously received information and the predicted information to generate beamforming coefficients for weighting information to be transmitted subsequently from the array of adaptive antenna elements, thereby allowing beamforming coefficients to be calculated prior to receipt of information to be received by the apparatus in at least one future transmission to the apparatus. *Col. 2, lines 49-62.*

As can be seen, Saunders generally teaches a method and apparatus for adaptive or predictive beamforming. However, Saunders does not teach or suggest the specific comparison required by the claims, and does not teach or suggest the specific determination required by the claims. Specifically, in terms of Claim 1, Saunders does not teach or suggest comparing said each of R active wireless terminal records to new downlink beamforming coefficients suitable for forming a downlink transmit beam for transmitting to said new wireless access terminal, and Saunders does not teach or suggest determining, in response to that comparison, at least one active wireless terminal record containing

corresponding downlink beamforming coefficients that have the least correlation with said new downlink beamforming coefficients.

As these limitations of the independent claims are not taught or suggested by Chheda or Saunders, alone or in combination, all rejections are legally and factually deficient, and should be reversed.

CONCLUSION

As a result of the foregoing, the Applicant asserts that the claims in the Application are in condition for allowance over all art of record, and that the rejections are both factually and legally deficient, and respectfully requests this case be returned to the Examiner for allowance or, alternatively, further examination.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Munck Butrus Deposit Account No. 50-0208.

Respectfully submitted,

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